<u>ABSTRACT</u>

The present invention is directed to the pesticidal treatment of stored foodstuffs, chambers, structures and works of art, using a volatile sulphur compound of general formula:

$$R-S-S_{x}-R' \qquad (I)$$

$$\binom{\parallel}{O}_{n}$$

in which R represents an alkyl or alkenyl radical containing from 1 to 4 carbon atoms, n is equal to 0, 1 or 2, x is a number ranging from 0 to 4, and R' represents an alkyl or alkenyl radical containing from 1 to 4 carbon atoms or, only if n=x=0, a hydrogen atom. These sulphur compounds (in particular dimethyl disulphide) are applied by nebulization directly to the material to be treated.